

Method and Device for Conditioning Comminuted Tobacco Material
Serial No.: 09/921,351
Atty. Docket #: BATO-6

REMARKS

Claims 6-27 and 30-31 remain in the application. Claims 1-5 and Claims 28 and 29 have been canceled. Reconsideration of the pending claims is respectfully requested.

Applicant's attorney acknowledges and affirms the October 23, 2002 telephone election of Group II including claims 6-31.

35 U.S.C. §112 Rejection of Claims 6-15

The Examiner has rejected claim 6 under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant's attorney has amended claim 6 rendering said ground of rejection moot.

Applicant's attorney has amended claim 6 to provide proper antecedent basis as noted by the Examiner.

The Examiner has rejected claims 9 and 10 under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant's attorney has amended claims 9 and 10 to provide proper antecedent basis and respectfully requests this ground of rejection be withdrawn.

35 U.S.C. §103(a) Rejection of Claims 6-10, 15-19, 21-22

Claims 6-10 and 15

The Examiner has rejected claims 6-10 and 15 under 35 U.S.C. §103(a) as being unpatentable over Grigutsch et al. in view of WO 87/07478. Applicant's attorney respectfully traverses the Examiner's ground of rejection.

The Examiner alleges that the Grigutsch et al. reference in view of WO 87/07478 teaches each of the elements of claim 6 of the instant application. The Grigutsch et al. reference teaches a method and apparatus for applying conditioning agent to tobacco comprising an upper cell

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wheel, a lower cell wheel, and a non-pressurized chamber interposed between the upper and lower cell wheels wherein water and steam are alternatingly received. The lower wheel sluice is in communication with a dryer for drying and conveying tobacco. The patent further teaches a duct in flow communication with the chamber wherein the steam is pressurized between 1 and 10 bar. However, this cited reference does not teach the use of pressure differential proof cellular wheel sluices to maintain an elevated pressure within the chamber. Moreover, the reference fails to teach or suggest a chamber which may withstand or otherwise be operated at a hyperbaric pressure.

The Examiner has further cited International Application Publication WO 87/07478 which teaches an improvement related to the treatment of tobacco comprising feed and discharge steam locks and a pressure vessel having a conveyor means therein interposed between the feed and discharge steam locks. The feed and discharge steam locks each comprise a rotary housing chamber, cell wheels, and arresters defined by two lobed rotors. The invention further comprises an electric superheater for superheating steam which is dispersed within the pressure vessel. The conveyor means includes a conveyor, a head pulley, and a tail pulley and requires that the conveyor extends laterally through the vessel such that the conveyor receives tobacco from a first steam lock and conveys the tobacco to a second end of the vessel for release into the second steam lock. Also positioned within the pressure vessel and in fluid communication with the superheater is at least one duct carrying superheated steam.

The Examiner states that it would have been obvious to modify Grigutsch et al. with the cell wheel/arrester/surpassing valve of WO 87/07478. However, the Grigutsch et al. reference

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teaches away from such a combination with the '478 publication and therefore may not be combined as suggested by the Examiner. Grigutsch et al. states that the chamber and lower cell wheel may be cleaned with water (8) and that the water is introduced in an alternating manner with the steam (9). See col. 5, lines 46-50. However, the WO 87/07478 publication teaches away from this combination stating at page 5 the steam should be dry and further that "wet steam is filtered by the tobacco causing undesirable soggy bottom layer to the tobacco". Thus, the Examiner's combination of Grigutsch et al. with WO 87/07478 publication is improper since the use of water with superheated steam would result in "wet steam" and soggy tobacco. In other words the '478 publication removes motivation to combine with the Grigutsch et al.

MPEP §2142 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Clearly, the Examiner has failed to make a *prima facie* showing of obviousness since Applicant's attorney has shown an improved combination by the Examiner.

In addition to the lack of motivation to combine the references, the Grigutsch et al. reference fails to teach or suggest a pressurized chamber. The combination of steam locks of the WO 87/07478 publication also fails to provide a pressurized chamber since nowhere does the Grigutsch et al. reference teach or suggest use of a chamber at elevated or hyperbaric pressure.

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Addition of the pressure vessel of the WO 87/07478 reference does not aid this lack of disclosure since the pressurized chamber of the instant application is much improved over the publication in several respects. First, the '478 publication requires a vessel wherein a plurality of structure is located including rails, conveyor structures, and piping, which are quite complicated to both install and maintain. Second the vessel of the cited publication is maintained at a horizontal orientation because of the use of the conveyor structure and piping therein. Third, the use of various structures within the pressure vessel of the cited publication provides locations for interference of cascading tobacco particles through the chamber requiring periodic cleaning of tobacco build-up. The applicant has eliminated all these parts to provide an improved pressurized chamber for a continuous process. Finally, on page 5 of the Office Action, the Examiner admits that the instant invention provides "for an improved chamber wherein the expanding of tobacco can efficiently and effectively occur." Thus, the Grigutsch et al. reference fails to provide a pressurized chamber and the Applicant teaches a chamber which is much improved over the pressure vessel provided in the '478 reference.

For these reasons, Applicant's attorney asserts that claim 6 is allowable since the Examiner has not made a *prima facie* showing of obviousness and respectfully requests this ground of rejection withdrawn.

In addition, claims 7-10 and 15 depend, directly or indirectly, from independent claim 6 and therefore include all of the limitations of claim 6. Thus claims 7-10 and 15 are believed to be in condition for allowance and Applicant's attorney further requests these rejections be withdrawn.

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Claims 16-19 and 21-22

The Examiner has rejected claims 16-19 under 35 U.S.C. §103, as being unpatentable over Grigutsch et al. in view of WO 87/07478. Applicant's attorney respectfully traverses the Examiner's ground of rejection.

The Examiner alleges that the combination of Grigutsch et al. in view of WO 87/07478 teaches each of the elements of claim 16. As previously described, the WO '478 publication teaches away from the Grigutsch et al. reference since the publication requires the use of superheated "dry steam" and Grigutsch et al. teaches the use of steam and water, resulting in "wet steam". Therefore, the combination asserted by the Examiner is improper and cited references cannot be combined as set forth in the Examiner's office action. Moreover, an improper combination of Grigutsch et al. and the '478 publication still fails to provide all the elements of the claimed invention. As previously described, the Grigutsch et al. teaches a non-pressurized chamber interposed between an upper and a lower cell wheel further comprising ducts for alternating water and steam into the chamber. However, the Grigutsch et al. reference fails to disclose a pressurized chamber as claimed in the instant invention. The addition of steam locks from the WO 87/07478 reference fails to provide a pressurized chamber. Thus the Examiner has failed to make a prima facie showing of obviousness. Finally, the addition of the pressure vessel of the WO 87/07478 publication to Grigutsch et al. does not aid this lack of disclosure since the pressurized chamber of the instant application is much improved in various respects over the '478 pressure vessel as previously described herein. Thus, Applicant's attorney

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asserts the Examiner has failed to make a prima facie showing of obviousness and respectfully requests this ground of rejection removed.

Claims 17-19 and 21-22 depend, directly or indirectly, from claim 16 and therefore include all of the limitations of claim 16. As previously discussed the cited references teach away from one another and therefore remove any motivation to combine. In addition, an improper combination asserted by the Examiner fails to teach all of the elements of the claimed invention since the cited combination of Grigutsch et al. and the steam locks of the '478 publication fails to teach a pressurized chamber. And, addition of a pressure vessel of the '478 does not aid this lack of teaching since the chamber of the instant application is much improved over the '478 reference. Applicant's attorney asserts that since independent claim 16 is believed to be allowable, dependent claims 17-19 and 21-22 are also in condition for allowance.

Applicant's attorney respectfully requests this ground of rejection withdrawn.

35 U.S.C. §103(a) Rejection of Claims 11-12, 20, 25-27, 29-31

Claims 11-12

The Examiner has rejected claims 11-12 under 35 U.S.C. §103(a) as being unpatentable over Grigutsch et al. in view of WO 87/07478 and further in view of Bichsel. Applicant's attorney respectfully traverses the Examiner on this ground of rejection.

Claims 11-12 depend from claim 6 and therefore include all the limitations of claim 6. As described previously, the combination of steam locks of the WO 87/07478 publication with the Grigutsch et al. reference fails to teach or suggest a pressurized chamber suitable for hyperbaric operation. Moreover, the combination of the WO 87/07478 system with the

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Grigutsch et al. reference appears improper since the publication teaches the use of "dry steam" and the Grigutsch system teaches use of water and steam which would likely result in wet steam. Thus, the Examiner has failed to make a *prima facie* showing of obviousness. Applicant's attorney asserts that claims 11-12 are in condition for allowance and respectfully requests this ground of rejection be withdrawn.

Additionally, claim 12 has been amended to more clearly define the patentable subject matter. The claim states "The device as set forth in claim 6, wherein said chamber is provided with a heating jacket, said heating jacket in vapor communication with a steam source."

Claim 20

The Examiner has rejected claim 20 under 35 U.S.C. §103(a) as being unpatentable over Grigutsch et al. in view of WO 87/07478 and further in view of Bichsel. Applicant's attorney respectfully traverses this ground of rejection.

As previously described, claim 16 is believed to be allowable since the cited references teach away from one another and even an improper combination fails to teach or suggest all of the limitations of the instant claim. Claim 20 depends from claim 16 and therefore includes all the limitations of claim 16 noted above. Bichsel fails to provide additional teaching or suggestion which is noted as lacking in the Grigutsch et al. or WO 87/07478 publication.

Bichsel merely states a chamber positioned about the outer surface of a vessel. However, Col. 1, lines 11-26 of the Bichsel reference describe a device which must be opened and closed and therefore does not operate in a continuous process as the instant invention. In other words, the Bichsel reference teaches away from the continuous process of the instant application and

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Grigutsch et al. Thus, the Examiner has failed to make a *prima facie* showing of obviousness.

Applicant's attorney asserts that claim 20 is allowable and respectfully requests this ground of rejection be withdrawn.

Claim 25

The Examiner has rejected claims 25-26 under 35 U.S.C. §103(a) as being unpatentable over Grigutsch et al. in view of WO 87/07478 and further in view of Bichsel. Applicant's attorney respectfully traverses this ground of rejection.

Applicant's attorney has amended claim 25 to more clearly define the patentable subject matter of the instant invention. Claim 25 now includes the limitation "said second pressure differential proof wheel sluice having a larger conveying volume than said first pressure differential proof wheel sluice". As previously discussed, combination of Grigutsch et al. and the WO 87/07478 publication is improper since the publication clearly teaches the required use of "dry" superheated steam while the Grigutsch et al. reference describes the alternating use of water and steam, which would likely result in a "wet" steam. Moreover, Grigutsch et al. fails to disclose a pressurized chamber. The addition of steam locks, noted by the Examiner, from the '478 publication also fails to teach a pressurized chamber as in the claimed invention. And, although the '478 publication teaches a pressure vessel, the pressurized chamber of the instant invention is clearly an improvement over the pressure vessel disclosed in the publication since the '478 reference teaches a horizontally oriented vessel wherein a plurality of structure is located including rails, conveyor structure, and piping. To the contrary, the instant invention comprises a vertically oriented pressurized chamber having nozzles in the walls of the vessel

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preventing interference of cascading tobacco therethrough. The Bichsel reference teaches away from the instant invention and fails to aid the noted lack of disclosure. Therefore claim 25 is believed to be in condition for allowance and Applicant's attorney respectfully requests this ground of rejection withdrawn.

In addition, claim 26 depends from claim 25 and includes all the limitations of claim 25. Since the Examiner has failed to make a prima facie showing of obviousness with respect to claim 25, claim 26 is also believed to be in condition for allowance. Further, claim 26 has been amended to more clearly define the patentable subject matter and now states said vapor source is superheated vapor in vapor communication with said heating jacket and having a temperature between about 100⁰ C and 200⁰ C.

Applicant's attorney asserts claims 25-26 to be allowable and respectfully requests this ground of rejection withdrawn.

Claims 27 and 29

The Examiner has rejected claims 27 and 29 under 35 U.S.C. §103(a) as being unpatentable over Grigutsch et al. in view of WO 87/07478, and in further view of Bichsel. Applicant's attorney respectfully traverses this ground of rejection.

The Examiner alleges that the combination of Grigutsch et al. in view of WO 87/07478 and further in view of Bichsel teach all of the elements of claim 27. However, as previously discussed Grigutsch et al. fails to disclose a pressurized chamber. The addition of the steam locks of WO 87/07478 does not result in a pressurized chamber since the Grigutsch et al. reference fails to teach or suggest a chamber which is capable of operation at hyperbaric

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pressures. In addition Applicant's attorney has amended claim 27 to more clearly define the patentable subject matter. Claim 27 now includes the limitation the chamber being tapered from said upper inlet to said lower outlet. This limitation is not taught by the combination of Grigutsch et al. and WO 87/07478. Bichsel does not aid in this lack of teaching or suggestion. Bichsel merely teaches a chamber positioned about the outer surface of a vessel. However, Col. 1, lines 11-26 of the Bichsel reference describe a device which must be opened and closed and therefore does not operate in a continuous process as the instant invention. In other words, the Bichsel reference teaches away from the continuous process of the instant application and Grigutsch et al.

Finally, the combination of the cited references is improper since the WO 87/07478 reference teaches away from the use of "wet" steam as discussed previously. In addition, the Bichsel reference teaches away from combination with Grigutsch et al. as previously discussed. Thus claim 27 is believed to be allowable and Applicant's attorney respectfully requests this ground of rejection withdrawn.

Claim 29 has been cancelled.

Claim 31

The Examiner has rejected claim 31 under 35 U.S.C. 103(a) as being unpatentable over Grigutsch et al. in view of WO 87/07478, and in further view of Bichsel. Applicant's attorney respectfully traverses this ground of rejection.

The Examiner alleges that the cited prior art teaches or suggests all of the limitations of claim 31. Claim 31 has been amended to further define the instant patented invention. The

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amended limitations include a second cell wheel at the lower discharge end of the chamber having a larger conveying volume. The Grigutsch et al. patent and the Application Publication WO 87/07478 fail to teach this element alone or in combination. A further limitation has been included claiming that the chamber tapers from the upper inlet to the lower outlet. The cited references also fail to teach this limitation either alone or in combination. The Bichsel reference fails to aid this noted lack of disclosure. Bichsel merely teaches a chamber positioned about the outer surface of a vessel. However, Col. 1, lines 11-26 of the Bichsel reference describe a device which must be opened and closed and therefore does not operate in a continuous manner as the instant invention. In other words, the Bichsel reference teaches away from the continuous process of the instant application and Grigutsch et al.

As previously discussed, Grigutsch et al. fails to disclose a pressurized chamber. And, although the WO 87/07478 publication teaches a pressure vessel, the pressurized chamber of the instant invention is clearly an improvement over the pressure vessel disclosed in the publication for the reasons cited earlier. Moreover, the combination of Grigutsch et al. with the WO 87/07478 publication is improper since the publication clearly teaches the required use of "dry" superheated steam while the Grigutsch et al. reference describes the alternating use of water and steam, which would likely result in a "wet" steam. For these reasons, Applicant's attorney asserts that claim 31 is allowable and respectfully requests this ground of rejection withdrawn.

35 U.S.C. §103(a) Rejection of Claims 13-14, 23-24 and 28

Claims 13-14

The Examiner has rejected claims 13-14 under 35 U.S.C. §103(a) as being unpatentable

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over Grigutsch et al. in view of WO 87/07478, and in further view of Hibbitts et al. Applicant's attorney traverses this ground of rejection.

As previously discussed, the Grigutsch et al. reference fails to teach or suggest a chamber which may be operated at hyperbaric pressures or may withstand such pressures. Moreover, combination of the steam locks of the WO 87/07478 publication fails to provide a pressurized chamber. Further the publication teaches away from combination with Grigutsch et al., as previously described rendering the Examiner's combination improper, since the publication requires use of superheated steam only while the Grigutsch reference describes use of steam and water in the chamber rendering the tobacco soggy as taught in the '478 publication. Finally, the pressurized chamber of the instant application is much improved over the '478 pressure vessel and therefore is not obvious for reasons previously described.

Hibbitts et al. fails to aid this lack of teaching or suggestion and, upon closer review Hibbitts et al. also teaches away from the Grigutsch et al and '478 publication. Hibbitts et al. teaches an upper and a lower ball valve disposed about a chamber wherein carbon dioxide is used in a non-continuous process to expand tobacco. However, Hibbitts et al. teaches away from combination with the cited prior art references also rendering the Examiner's combination improper for two reasons. First, in the description of the prior art at Column 1, lines 22-30, the Hibbitts et al. reference describes the use of steam under pressure to expand the tobacco between about 5 and 15 percent. At Column 1, lines 60-68 the references states that these uses [of steam] are too costly or cumbersome to operate. In other words, the Hibbitts et al. reference teaches away from the use of steam in a tobacco expansion process. Second, the Hibbitts reference

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teaches a non-continuous process since the ball valves have to be opened, tobacco placed in the chamber, then closed, for the expansion process. Since the Grigutsch et al. and WO 87/07478 references fail to teach the claimed limitation and teach away from one another, and the Hibbitts et al. reference teaches away from combination with Grigutsch et al. and WO 87/07478 the Examiner has not made a prima facie showing of obviousness. Applicant's attorney asserts the Examiner has failed to make a prima facie showing of obviousness and respectfully requests this ground of rejection withdrawn.

Claims 23-24, 28

The Examiner has rejected claims 23-24 and 28 under 35 U.S.C. §103(a) as being unpatentable over Grigutsch et al. in view of WO 87/07478, and in further view of Hibbitts et al. Applicant's attorney respectfully traverses this ground of rejection.

As previously discussed Hibbitts et al. teaches away from combination with Grigutsch et al. and WO 87/07478. In addition, the Grigutsch et al and '478 publication fail to teach a pressurized chamber and the references teach away from one another rendering their combination improper. The Hibbitts et al. reference states that steam is too costly and cumbersome and therefore teaches the use of carbon dioxide to expand tobacco. Thus, claims 23-24 are believed to be in condition for allowance and Applicant's attorney respectfully requests this ground of rejection withdrawn.

Claim 28 has been cancelled.

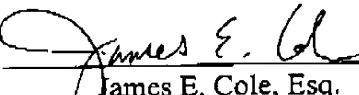
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Conclusion

Applicant urges that the instant application is in condition for allowance. However, if the Examiner believes there are other unresolved issues in this case, Applicant's attorney of record would appreciate a collect call at (502) 625-2746 to discuss such remaining issues.

Respectfully submitted,

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James E. Cole, Esq.

MIDDLETON REUTLINGER

2500 Brown & Williamson Tower

Louisville, Kentucky 40202

(502) 584-1135

Reg. No. 50,530

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